



S/N 10/021,098

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Howard Fingerhut Examiner: Randy Peaches  
Serial No.: 10/021,098 Group Art Unit: 2681  
Filed: December 12, 2001 Docket No.: 60027.0043US01/BS00345  
Title: Method and System for Providing Entry Node Location in a Wireless Telecommunications System

CERTIFICATE UNDER 37 CFR 1.8:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on October 4, 2004.

  
Murrell W. Blackburn, Reg. No. 50,881

DECLARATION OF HOWARD FINGERHUT UNDER 37 C.F.R. §1.131

Howard Fingerhut declares that:

1.

This declaration is to establish completion of the invention in this application in the United States on a date prior to October 4, 2001.

2.

I am the inventor of the invention described in U.S. Patent Application Serial No. 10/021,098 filed on December 12, 2001, entitled " Method and System for Providing Entry Node Location in a Wireless Telecommunications System."

3.

I was an employee of BellSouth Corporation, assignee for the above-identified patent application, at the time the invention described and claimed in this patent application was invented, and I am no longer employed by BellSouth Corporation.

4.

I conceived, in this country, the invention as described and claimed in the above-identified patent application prior to October 4, 2001 and coupled with due diligence prior to October 4, 2001, subsequently reduced the invention to practice. In support thereof, the following materials are attached.

A. A specification detailing the design of the invention by the inventor prior to October 4, 2001. The specification is attached hereto as EXHIBIT 1.

5.

All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true, and further, these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Howard Fingerhut  
Howard Fingerhut

10/4/04  
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## EXHIBIT 1

Oct-13-00 08:58am From-BELLSOUTH WIRELESS DATA

+7726071224

1-332 1 12/13 2-000

BellSouth Wireless Data	Date	Rev	File
Prepared by Howard Fingerhut	10/26/2000	A	

### Entry Node Location

#### Abstract

This function provides host access to mobile location information for traffic initiated by a mobile or as a result of a POSACK generated by a base to indicate the receipt of a packet sent to a mobile.

This function will only be enabled for hosts capable of accepting the additional information.

The ability to enable and disable this functionality on a Host subscription record will enable us to control access and bill for this value added service.

To minimize operational burden the host should be able to enable and disable this functionality. When enabled all packets received by the host will contain entry node location information. (NOTE: It is assumed that billing will be done based on the access to this feature rather than usage of it.)

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# EXHIBIT 1

Oct-30-00 09:55am From-BELL SOUTH WIRELESS DATA

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BellSouth Wireless Data	Date	Rev	File
Prepared by Howard Fingerhut	10/26/2000	A	

## Contents

<u>Entry Node Location</u>	1
<u>Abstract</u>	1
<u>Contents</u>	2
<u>Terminology</u>	3
<u>Background</u>	3
<u>History</u>	3
<u>Functional Overview</u>	3
General	3
Introduction	4
Affected Network Components	4
<u>Operational Requirements</u>	4
<u>Other Requirements</u>	4
<u>Installation</u>	4
<u>Limitations</u>	4

## EXHIBIT 1

Oct-22-00 08:58am From=BELL SOUTH WIRELESS DATA +7726023224 1-332 P 04/05 F-063

BellSouth Wireless Data	Date	Rev.	File
Prepared by rfoward.Fingarthur	10/26/2000	A	

### Terminology

**POSACK** Positive Acknowledgement of packet sent to a mobile generated in response to an RI<sup>2</sup> ACK indicating that the mobile has received the packet.

**A-Party** The sender or originator of the packet. In the case of a POSACK the A-Party is the Mobile and the Entry Node is the Base station generating the POSACK.

**Entry Node** The node address contained in the traffic log associated with the A-Party.

**Host** Is any, fixed terminal connected to the network via a MOX connection.

**CALEA** CALEA is the Commission on Accreditation for Law Enforcement Agencies. CALEA compliance is US legal requirements for surveillance of wireless users.

### Background

It has become apparent that the knowledge of a mobile's location is critical in many aspects of the wireless business.

#### Potential Applications

- Location specific content can only be provided if the location of the recipient is known. Requiring the user to enter the location is not always practical or possible.
- A host, with far more traffic handling capability than a radio channel, cannot be expected to manage the load that it places on a base station if it cannot determine what base station is being used by its mobile fleet.
- Service providers and resellers may be required to provide user location information in addition to message content to be CALEA compliant.
- Proper billing and taxation of wireless service requires knowledge of the location of the customer using the service. This information, while available to the operator in the form of traffic logs, is not available to service providers and resellers. Even if traffic logs were available it is not possible to tie traffic log records to service transactions.
- When traffic is passed from one network to another more than data content may be needed. The handoff of network entry information to an intermediate network can be supplied when more than one network is used to carry traffic from a user. This will enable all of the above applications even when more than one access network is used.

### History

A First version.

### Functional Overview

#### General

Information related to entry node is contained in a traffic log that moves through the network along with the user packet. The traffic log is updated with information as it moves through the network. At the network exit point the user traffic and traffic logs are separated. The MOX should add entry node information prior to separation of the user packet and traffic log, based on a host MAN subscription flag. If

## EXHIBIT 1

Oct-30-00 08:56am From-BELLSOUTH WIRELESS DATA

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BELLSOUTH WIRELESS DATA

Prepared by

Howard Fingerhut

Date

10/26/2000

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more than one MAN is operational on a port this feature should be controlled on an individual MAN basis, not for the entire connection.

### *Introduction*

### *Affected Network Components*

This feature is added to the MOX. NCC and NSAM interface enhancements are needed to control access to this feature.

### Operational Requirements

The ability to determine if this feature is enabled for any specific host MAN.

### Other Requirements

### Installation

Requires none.

### Limitations

None.